

What is claimed is:

1. An isolated or recombinant homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions.

2. The isolated or recombinant homotrimeric p30 polypeptide of claim 1, wherein the monomer polypeptide comprises isomers having a pI from about 7 to about 8.5.

3. A soluble isolated or recombinant homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions.

4. A liposome comprising a p30 polypeptide, wherein the p30 polypeptide comprises
a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or,

a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions.

5. A fusion protein comprising a p30 polypeptide, wherein the p30 polypeptide comprises

a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or,

a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions.

5 6. The fusion protein of claim 5, wherein the heterologous sequence is a tag.

 7. A pharmaceutical composition comprising a p30 polypeptide, wherein the p30 polypeptide comprises

10 a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or,

15 a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient.

20 8. A kit comprising a pharmaceutical composition and printed matter, wherein the pharmaceutical composition comprises a p30 polypeptide, wherein the p30 polypeptide comprises a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or, a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient,

25 wherein the printed matter comprises instructions for a use of the pharmaceutical composition, wherein a use comprises inhibiting virus entry into a cell or virus proliferation in a cell.

9. The kit of claim 8, wherein the instructions include use of the pharmaceutical composition for inhibiting virus proliferation in a cell or virus entry into a cell *in vivo*.

10. The kit of claim 8, wherein the virus is a herpesvirus.

11. The kit of claim 10, wherein the virus is a herpes simplex virus (HSV), a cytomegalovirus (CMV), a γ -herpesvirus or an Epstein Barr virus (EBV).

12. The kit of claim 11, wherein the inhibition of virus entry in the cell or virus proliferation in a cell is in a mammal.

13. The kit of claim 12, wherein the mammal is a human.

14. A kit comprising a pharmaceutical composition and printed matter, wherein the pharmaceutical composition comprises a p30 polypeptide, wherein the p30 polypeptide comprises a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or, a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient,

wherein the printed matter comprises instructions for a use of the pharmaceutical composition, wherein a use comprises modulating diseases with unwanted lymphocyte proliferation.

15. The kit of claim 14, wherein the instructions comprise use of the pharmaceutical composition to modulate a T or a B lymphoma or leukemia, or an autoimmune disease.

5 16. The kit of claim 15, wherein the autoimmune disease is rheumatoid arthritis, insulin-dependent diabetes mellitus, multiple sclerosis, systemic lupus erythematosus or myasthenia gravis.

10 17. A pharmaceutical composition comprising an expression vector encoding a p30 polypeptide having an apparent molecular weight of about 30 kDa or a p30 polypeptide lacking a transmembrane domain, wherein the p30 polypeptide forms a homotrimeric polypeptide that binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions.

15 18. A kit comprising a pharmaceutical composition and printed matter, wherein the pharmaceutical composition comprises an expression vector encoding a p30 polypeptide having an apparent molecular weight of about 30 kDa or a p30 polypeptide lacking a transmembrane domain, wherein the p30 polypeptide forms a homotrimeric polypeptide that binds to a herpes virus entry mediator (HVEM) polypeptide or a
20 lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient, and

wherein the printed matter comprises instructions for a use of the pharmaceutical composition, wherein a use comprises targeting of tumor cells or activated lymphocytes.

25 19. The kit of claim 18, wherein the use comprises treatment of a tumor by direct injection of the pharmaceutical composition into the tumor.

20. A method for inducing a proliferation-inducing signal to a lymphocyte comprising

30 (a) providing a composition that binds to cell surface expressed HVEM, and

(b) contacting the lymphocyte with a proliferation-inducing amount of the composition.

21. The method of claim 20, wherein the composition is an anti-HVEM antibody.

22. The method of claim 20, wherein providing the composition comprises providing

a p30 polypeptide, a soluble p30 polypeptide, a liposome-associated p30 polypeptide,
or
a vector encoding a p30 polypeptide or a cell expressing a recombinant p30 as a cell-associated p30 polypeptide.

23. The method of claim 20, wherein the lymphocyte is a T cell.

24. The method of claim 20, wherein the lymphocyte is a B cell.

25. The method of claim 20, wherein the lymphocyte is contacted *in vivo*.

26. A method for inhibiting a p30 polypeptide-mediated cellular response comprising

(a) providing an composition that inhibits binding of a cell surface expressed p30 polypeptide to a cell surface expressed HVEM or LT β R, and

(b) contacting the cell expressing the cell surface expressed p30 polypeptide or the cell surface expressed HVEM or LT β R with an amount of the composition sufficient to inhibit a p30 polypeptide-mediated cellular response.

27. The method of claim 26, wherein the cell is contacted with the composition *in vivo*.

28. The method of claim 26, wherein the inhibited p30 polypeptide-mediated cellular response comprises inhibition of a lymphocyte cellular response.

29. The method of claim 28, wherein the inhibited lymphocyte response is lymphocyte proliferation.

30. The method of claim 28, wherein the inhibited lymphocyte is a pathogenic effector cell.

31. The method of claim 28, wherein the inhibited lymphocyte response modulates a T or a B lymphoma or leukemia or an autoimmune disease.

32. The method of claim 31, wherein the autoimmune disease is rheumatoid arthritis, insulin-dependent diabetes mellitus, multiple sclerosis, systemic lupus erythematosus or myasthenia gravis.

33. The method of claim 28, wherein the inhibited lymphocyte response modulates a reaction to a transplant.

34. The method of claim 26, wherein the contacted cell expresses HVEM and the composition is a soluble p30 polypeptide.

35. The method of claim 26, wherein the contacted cell expresses LT β R and the composition is a soluble p30 polypeptide.

36. The method of claim 26, wherein the contacted cell expresses p30 polypeptide on its cell surface and the composition is a soluble HVEM polypeptide.

37. The method of claim 26, wherein the contacted cell expresses p30 polypeptide on its cell surface and the composition is an anti-p30 antibody.

38. A method for treating tumors comprising

- (a) providing a pharmaceutical composition comprising an expression vector encoding a p30 polypeptide having an apparent molecular weight of about 30 kDa or a p30 polypeptide lacking a transmembrane domain, wherein the p30 polypeptide forms a homotrimeric polypeptide that binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and
- (b) directly injecting the pharmaceutical composition into the tumor.

39. A method of modulating a lymphotoxin beta receptor (LT β R)-mediated cellular response, the method comprising:

- (a) providing a composition that inhibits binding of an LT β R to a p30 polypeptide; and
- (b) contacting a cell expressing the LT β R or the p30 polypeptide with an amount of the composition sufficient to modulate the lymphotoxin beta receptor (LT β R)-mediated cellular response.

40. The method of claim 39, wherein the cell expresses LT β R and the composition comprises a pharmaceutical composition

wherein the pharmaceutical composition comprises a p30 polypeptide comprising a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or, a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient.

41. The method of claim 39, wherein the cell expresses a p30 polypeptide and the composition comprises an anti-p30 antibody.

42. The method of claim 39, wherein the lymphotoxin beta receptor (LT β R)-mediated cellular response comprises binding of a herpesvirus to a cell.

43. The method of claim 42, wherein herpesvirus is blocked from entry into the cell.

44. The method of claim 42, wherein the herpesvirus is a herpes simplex virus (HSV), a cytomegalovirus (CMV), a γ -herpesvirus or an Epstein Barr virus (EBV).

45. A method for inhibiting virus production in a cell, the method comprising

(a) providing a p30 polypeptide; and,

(b) contacting a cell infected with a herpesvirus or a cell susceptible to infection by a herpesvirus with an effective amount of a p30 polypeptide, thereby inhibiting herpesvirus production in the cell.

46. The method of claim 45, wherein the entry of the herpesvirus into the cell is inhibited.

47. The method of claim 45, wherein the contacting is *in vivo* and the p30 composition is provided as a pharmaceutical composition,

wherein the pharmaceutical composition comprises a homotrimeric p30 polypeptide comprising a monomer polypeptide having an apparent molecular weight of about 30 kDa, wherein the homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin receptor (LTR) polypeptide under physiologic conditions, or, a soluble homotrimeric p30 polypeptide lacking a transmembrane domain, wherein the soluble homotrimeric polypeptide binds to a herpes virus entry mediator (HVEM) polypeptide or a lymphotoxin β receptor (LT β R) polypeptide under physiologic conditions, and a pharmaceutically acceptable excipient.

48. The method of claim 45, wherein the virus is a herpes simplex virus (HSV), a cytomegalovirus (CMV), a γ -herpesvirus or an Epstein Barr virus (EBV).

49. The method of claim 45, wherein the contacting is in a mammal.

50. The method of claim 49, wherein the mammal is a human.

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